Claims

What is claimed is:

1. A method, comprising the steps of:

   (a) stripping a first label from a first target nucleic acid hybridized to a probe nucleic acid on an assay format; and,

   (b) reusing said assay format by hybridizing a second target nucleic acid to said probe nucleic acid on said assay format, said second target nucleic acid comprising a second label distinct from said first label.

2. A method as claimed in claim 1, wherein said first label is a first labelled dendrimer.

3. A method as claimed in claim 2, wherein said second label is a second labelled dendrimer.

4. A method as claimed in claim 2, wherein said first labelled dendrimer is initially hybridized to said first target nucleic acid, and said stripping comprises disruption of said hybridization between said first labelled dendrimer and said first target nucleic acid.

5. A method as claimed in claim 1, further comprising the step of detecting signal from said second label.

6. A method for reusing an assay, comprising the steps of:

   stripping a first capture reagent from a first target nucleic acid hybridized to a probe nucleic acid on an assay format, wherein said first target nucleic acid initially comprises

a first capture sequence of nucleic acid hybridized to complementary nucleic acid of said first capture reagent, and said stripping comprises separation of said hybridized first capture sequence of nucleic acid and complementary nucleic acid of first capture reagent.

7. A method as claimed in claim 6, further comprising the step of applying a second target nucleic acid to said probe nucleic acid of said assay format, said second target nucleic acid comprising a second capture sequence, and hybridizing a second capture reagent to said second capture sequence.

8. A method as claimed in claim 6, wherein said first capture reagent is a dendrimer.

9. A method as claimed in claim 7, wherein said second capture reagent is a dendrimer.

10. A method as claimed in claim 7, wherein said first and second capture reagents each further comprise labels, said labels each producing a detectable signal.

11. A method for reusing an assay, comprising the steps of:

(a) conducting a first assay, said first assay comprising:

(i) a first hybridization of a target nucleic acid to probe nucleic acid located on an assay format, and

(ii) hybridization of a first capture reagent to said target nucleic acid, wherein said target nucleic acid comprises a first capture sequence which hybridizes with a complementary nucleic acid sequence of said first capture reagent;

(b) stripping said first capture reagent from said target nucleic acid; and,

(c) conducting a second assay on said assay format, said second assay comprising:

(i) a second hybridization of target nucleic acid to probe nucleic acid on the same assay format used for said first assay; and,

(ii) hybridization of a second capture reagent to the target nucleic acid of said second assay, wherein said target nucleic acid of said second assay comprises a second capture sequence for hybridization to said second capture reagent, said second capture sequence being a nucleic acid sequence which is different from the nucleic acid sequence of said first capture sequence.

12. A method as claimed in claim 11, wherein said first capture reagent comprises a label for producing a detectable signal.

13. A method as claimed in claim 11, wherein said second capture reagent comprises a label for producing a detectable signal.

14. A method as claimed in claim 12, wherein said stripping of said first capture reagent is followed by a detection of any of said label on said assay format to verify that none of said label of said first capture reagent can be detected on said assay format.

15. A method as claimed in claim 12, further comprising the step of detecting the signal produced by said first capture reagent before said stripping of said first capture reagent.

16. A method as claimed in claim 12, further comprises detection of the signal produced by said first capture reagent.

17. A method as claimed in claim 15, further comprising the step of detecting the signal produced by said second capture reagent after said second assay.

18. A method as claimed in claim 11, wherein said assay format is a blot.

19. A method as claimed in claim 11, wherein said assay format is a microarray.

20. A method as claimed in claim 11, wherein at least one of said first and second assays comprises single channel detection.

21. A method as claimed in claim 11, wherein at least one of said first and second assays comprises dual channel detection.

22. A method as claimed in claim 11, further comprising the step of conducting further assays on said format using target nucleic acids comprising capture sequences which are different from the capture sequences used in any of the prior assays on said assay format.

23. A method for reusing an assay, comprising the steps of:

(a) conducting a first assay, said first assay comprising:

(i) a first hybridization of a target nucleic acid to probe nucleic acid located on an assay format, and

(ii) hybridization of a first dendrimer to said target nucleic acid, wherein said target nucleic acid comprises a first capture sequence which hybridizes with a complementary nucleic acid sequence of said first dendrimer;

(b) stripping said first dendrimer from said target nucleic acid; and,

(c) conducting a second assay on said assay format, said second assay comprising:

(i) a second hybridization of target nucleic acid to probe nucleic acid on the same assay format used for said first assay; and,

(ii) hybridization of a second dendrimer to the target nucleic acid of said second assay, wherein said target nucleic acid of said second assay comprises a second capture sequence for hybridization to said second dendrimer, said second capture sequence being a nucleic acid sequence which is different from the nucleic acid sequence of said first capture sequence.

24. A method as claimed in claim 23, wherein said first dendrimer comprises a label for producing a detectable signal.

25. A method as claimed in claim 23, wherein said second dendrimer comprises a label for producing a detectable signal.

26. A method as claimed in claim 24, wherein said label is a flourescent label.

27. A method as claimed in claim 25, wherein said label is a flourescent label.

28. A method as claimed in claim 24, further comprising the step of detecting said signal of said label of said first dendrimer before said stripping of said dendrimer from said target nucleic acid.

29. A method as claimed in claim 25, further comprising the step of detecting said signal of said label of said second dendrimer.

30. A method as claimed in claim 24, wherein said stripping of said first dendrimer is followed by a detection of any of said label on said assay format to verify that none of said label of said first dendrimer can be detected on said assay format.

31. A method as claimed in claim 23, wherein said assay format is a blot.

32. A method as claimed in claim 23, wherein said assay format is a microarray.

33. A method as claimed in claim 23, wherein at least one of said first and second assays comprises single channel detection.

34. A method as claimed in claim 23, wherein at least one of said first and second assays comprises dual channel detection.

35. A method as claimed in claim 23, further comprising the step of conducting a third assay on said format using a target nucleic acid comprising a third capture sequence, said third capture sequence comprising a nucleic acid sequence which is different from the nucleic acid sequences of both said first capture sequence and said second capture sequence.

36. A method as claimed in claim 23, further comprising the step of conducting a third assay on said format using a target nucleic acid comprising a third capture sequence, said third capture sequence comprising a nucleic acid sequence which is different from the nucleic acid sequences of both said first capture sequence and said second capture sequence.

37. A method as claimed in claim 23, further comprising the step of conducting further assays on said format using target nucleic acids comprising capture sequences which are different from the capture sequences used in any of the prior assays on said assay format.

38. A method as claimed in claim 23, wherein said capture sequence comprises 31 base pairs.

39. A method as claimed in claim 23, wherein at least one of said first and second assays is used for RNA expression analysis.